

ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

AB This invention describes a method for producing compd. **semiconductor quantum particles** from at least a metallic element selected from Groups IIA, IIB, IIIA, IVA, and VA of the periodic table and at least a nonoxygen reactant element selected from the group consisting of P, As, S, Se, and Te. The method includes: (a) operating a heating and atomizing means to provide a stream of super-heated fine-sized fluid droplets of a selected metallic element into a reaction chamber; (b) directing a stream of a reactant element-contg. fluid medium into the chamber to impinge upon and react with the super-heated metal fluid droplets to form substantially nanometer-sized phosphide, arsenide, sulfide, selenide, and/or telluride compd. particles; and (c) cooling and/or passivating the compd. particles to form the desired compd. **semiconductor quantum particles**. These quantum particles are particularly useful for photo luminescence and biol. labeling applications.

ACCESSION NUMBER: 2003:492241 CAPLUS  
DOCUMENT NUMBER: 139:45241  
TITLE: Method for the production of **semiconductor quantum particles**  
INVENTOR(S): Huang, Wen-Chiang  
PATENT ASSIGNEE(S): USA  
SOURCE: U.S. Pat. Appl. Publ., 17 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003116080	A1	20030626	US 2001-7562	20011210
US 6623559	B2	20030923		

PRIORITY APPLN. INFO.: US 2001-7562 20011210

L11 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

AB A method for producing compd. **semiconductor quantum particles** from at least a metallic element selected from Groups IB, IIA, IIB, IIIA, IVA, and VA of the periodic table and at least a nonoxygen reactant element selected from the group consisting of P, As, S, Se, and Te. The method includes the steps of: (a) mixing a 1st precursor compn. contg. at least a metallic element with a 2nd precursor compn. contg. at least a reactant element to form a reacting fluid in which nanometer-size compd. **semiconductor** clusters are pptd. out of a liq. medium; (b) operating an atomizer to a break up the reacting fluid into micron- or nanometer-size fluid droplets with each fluid droplet contg. a predetd., but small no. of nanometer-size compd. **semiconductor** clusters dispersed in the liq. medium for the purpose of constraining the growth of the clusters; (c) directing the fluid droplets into a material treatment stage to further sep. and/or passivate the clusters to form the desired compd. **semiconductor quantum particles**; and (d) drying and collecting the quantum particles in a solid powder form.

ACCESSION NUMBER: 2003:454698 CAPLUS  
DOCUMENT NUMBER: 139:29309  
TITLE: Manufacturing method for **semiconductor quantum particles**  
INVENTOR(S): Huang, Wen-Chiang; Song, Lulu  
PATENT ASSIGNEE(S): USA  
SOURCE: U.S. Pat. Appl. Publ., 10 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent

LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003106488	A1	20030612	US 2001-7563	20011210
PRIORITY APPLN. INFO.:			US 2001-7563	20011210

=> d his

(FILE 'HOME' ENTERED AT 13:25:22 ON 05 NOV 2003)

FILE 'INSPEC, CAPLUS' ENTERED AT 13:28:43 ON 05 NOV 2003

L1 0 S ((NANO1PARTIC2) OR (QUANTUM DOT) OR (NANO1CRYSTAL3)) AND (ATO  
L2 29067 S ((NANO1PARTIC2) OR (QUANTUM DOT) OR (NANO1CRYSTAL3))  
L3 0 S (ATOMIZ2)  
L4 100074 S (ATOMIZ? OR DROPLET?)  
L5 273 S L2 AND L4  
L6 189483 S (PHOSPHIDE OR ARSENIDE ORSULFIDE OR SELENIDE OR TELLURIDE)  
L7 19 S L5 AND L6  
L8 737564 S (PHOSPHIDE OR ARSENIDE OR SULFIDE OR SELENIDE OR TELLURIDE)  
L9 124 S L5 AND L8  
L10 72 S L9 AND SEMICONDUCT?  
L11 2 S L10 AND (QUANTUM PARTICLE)

=>